UNITED NATIONS

Framework Convention on Climate Change

Distr.
GENERAL

FCCC/IDR.1(SUM)/RUS
4 April 1997

Original: ENGLISH

SUMMARY

of the

REPORT OF THE IN-DEPTH REVIEW OF THE NATIONAL COMMUNICATION

of

RUSSIAN FEDERATION

(The full text of the report (in English only) is contained in document FCCC/IDR.1/RUS)

Review team:

Lubomir Nondek, Czech Republic
Roberto Acosta Moreno, Cuba
Audun Rosland, Norway
Lee Solsbery, International Energy Agency
Andrea Pinna, UNFCCC secretariat
Lucas Assunção, UNFCCC secretariat, Coordinator

Also available on the World Wide Web (http://www.unfccc.de)

GE.97- 60806

Summary[1]

1. The in-depth review was carried out between April and December 1996 and included a visit to Moscow from 22 to 26 April 1996. The review team included experts from the Czech Republic, Cuba, Norway and the International Energy Agency.

2. Due to the overall macro-economic instability and deep recession which has persisted since the early 1990's, the energy-related CO_2 emission level in the Russian Federation in 1995 was roughly 26 per cent lower than the 1990 level. As a result of the transition to a market economy, the Russian Federation has experienced a sharp deterioration of all major economic and social indicators since 1990, including a decrease in real gross domestic product (GDP) of roughly 38 per cent from 1990 to 1995. A drastic reduction of the government budget followed, which included a dramatic cut in defence expenditure and severe cuts in the social and environment areas. The sharp decline in industrial activity and the ongoing restructuring in the Russian economy make it likely that energy-related CO_2 emissions will only return to 1990 levels after 2010. These projections do not take into account the effects of any yet to be implemented special mitigation measures related to climate change, although they do include the effects of energy conservation measures of the Russian energy policy (not described in the communication) and an expected increase of the share of natural gas in total primary energy supply (TPES) from 40 per cent in 1990 to 54 per cent in 2000. In spite of the fact that per capita TPES has in recent years been lower than the OECD average, Russian Federation's energy-related CO_2 emissions in 1990 amounted to over 16 tonnes per person compared with the OECD and EU averages of 12 and 9 tonnes, respectively.

3. The review team appreciates the difficulties faced by the Russian Federation to present a 1990 greenhouse gas (GHG) inventory due to the fact that in 1990 the Russian Federation did not exist as an independent state and the existing statistics do not allow for a clear breakdown of emissions among independent states which then formed the Soviet Union.

4. In the Russian Federation's national communication, emission data were not reported in accordance with IPCC standard tables, nor was full documentation provided about the methodologies used to determine GHG emission levels from different emission sources and CO_2 removal by sinks. Hence, the transparency and the comparability of the emission inventory was not sufficient. During the in-depth review, however, government officials provided additional information which substantially improved the transparency of inventories. Despite the improvements made, the team wishes to note that in accordance with the adopted

---

[1] In accordance with decision 2/CP.1, the full draft of this report was communicated to the Government of the Russian Federation, which had no further comments.

reporting guidelines future GHG inventories should use IPCC standard data tables and provide the necessary background to enable the reconstruction of the inventories. In general, the uncertainty levels associated with GHG inventories were not provided. Government officials recognize that methane emission levels from the natural gas industry are highly uncertain. The review team strongly recommended that an assessment of the uncertainty of emission level estimates be provided with the next communication.

5. Total CO_2 emissions amounted to 2,387,000 Gg in 1990, which represented 11 per cent of the global CO_2 emissions, making the Russian Federation the world's second highest emitter of energy-related CO_2. The 1990 emission level was reviewed in depth and confirmed during the visit. Fuel combustion emissions represented 98 per cent of the total, while the remaining 2 per cent originated in industrial processes, particularly in cement production. No sectoral breakdown of CO_2 emissions from fuel combustion was made available. Methane emissions amounted to 27,000 Gg in 1990 which represented 7.2 per cent of the global emissions. Fugitive fuel emissions from production, final use and transport of natural gas as well as from coal mining and oil extraction represented 72 per cent of the total methane emissions. Total N_2O emissions of 820 Gg in 1990 were corrected during the in-depth review to 230 Gg. N_2O emissions from agricultural sector represented roughly 87 per cent of the total N_2O emissions. Using 1994 IPCC global warming potentials (100-year time horizon), 1990 CO_2 emissions (excluding land use change and forestry) represented 72 per cent of total GHG emissions, while methane accounted for 20 per cent.

6. GHG inventories for years other than 1990 were not provided during this review, making it difficult to assess GHG emission trends. The team strongly recommends that an attempt be made to fulfill Annex I Party commitments -- as agreed on in decision 3/CP.1 of the Conference of the Parties -- to submit GHG inventories for recent years, following IPCC reporting guidelines and the sectoral breakdown adopted by other Annex I Parties. Additionally, emissions arising from international bunker fuels have not been reported separately from other emission sources. The communication did not include emission figures for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) and only aggregated emission levels for precursor gases were provided. The Russian Federation is encouraged to report emission data for these gases in the next national communication, particularly in view of the large production of aluminium and magnesium in the country.

7. The Russian Federation has a very large CO_2 sink capacity in its forests compared to other Annex I Parties, amounting to 587,000 Gg per year and representing roughly 25 per cent of its total CO_2 emissions. Although, forests which timber is not properly harvested or which are in a pristine state without any forest management are included in this estimate, the team considers that the methodology used in estimating this forest sink capacity to be a result of a detailed and rigorous scientific work. A substantial potential for the enhancement of CO_2 sinks has also been identified in afforestation of abandoned land. Russian Federation's first communication reported a very large CO_2 sink capacity in Russian peatlands (147,000 Gg/year). The methodology used deviates from the IPCC inventory guidelines since CO_2 sink

capacity in peatlands is considered to be essentially non-anthropogenic, hence not included in GHG inventory totals[2].

8. Although a major potential for energy saving in the Russian economy, in the order of 40 to 45 per cent, has been identified, very limited information is available on the status of energy saving measures. The team felt that the climate change issue in the country could usefully be promoted in conjunction with the recognized need to promote improvements in energy use as well as energy savings and to introduce new energy efficient technologies and management practices in industry, in the transport infrastructure, in the residential and commercial sectors. There seems to exist real opportunities to introduce energy efficiency measures which can at the same time result in net economic gains to the society.

9. The lack of detailed information on recent federal laws and programmes makes it difficult to understand the full context in which FCCC-related policies and measures could be implemented. The team strongly recommends the inclusion in the second national communication of information on these recent developments -- such as the energy strategy and the federal energy efficiency programme -- which would serve to mitigate GHG emissions even if that was not their primary or sole objective. The inclusion of information on their status of funding, level of implementation and management responsibilities would greatly improve understanding by all Parties of the challenges being confronted by and policy options available to the Russian Government. During this review, the team noted that several initiatives related to climate change seemed dependent on approval of the special federal programme entitled "Prevention of dangerous climate changes and their negative consequences." It seemed that its approval could greatly improve the Russian Federation's ability to implement Articles 4.1, 4.2 and 12.1 of the Convention. Subsequently, it was confirmed that the programme had been approved on 19 October 1996, although its full funding is not yet guaranteed.

10. The team advocates a more proactive role by the Interagency Commission of the Russian Federation on Climate Change (established in 1994) in increasing awareness of GHG issues and opportunities for cost-effective measures consistent with local development objectives among policy- and decision-makers in the Russian Federation, both at the federal and regional levels. It was felt that its role could be enhanced by usefully increasing its involvement in the actual monitoring of climate-related measures.

11. The team finds it imminently reasonable that the Russian Federation considers the prevailing economic situation as the basic context for viewing policies and measures, along with the need to take action in line with overall economic and energy policies. The review team feels, however, that it is possible to pursue several "no regrets" options that respond to

---

[2] The same procedure of excluding peatland sinks has been adopted in the in-depth review of communications submitted by other Annex I Parties to the Convention, such as Finland, Ireland and the United Kingdom, which also have large areas of peatland in their territories.

economic and energy goals as well as climate ones without being inconsistent with the underlying principles adopted by the Russian Federation. Indeed, these principles would seem to argue for giving some "no regrets" options high priority in the present Russian Federation.

12. Measures were not described in the communication or in documentation provided to the review team in sufficient detail to show how they would work, to determine what their status of implementation might be or to assess in a reliable fashion their specific impacts in terms of climate change mitigation. The majority of measures described are part of Russian Federation's energy strategy that was developed in 1993-1994 and adopted in 1995 by special presidential decree, though it is unclear who remains responsible for their overall implementation in the context of FCCC. It would seem that there is a consensus that GHG mitigation options cannot be given priority until the state of the economy improves. On the other hand, in contrast to previous energy programmes in the Soviet Union oriented towards large-scale growth in energy output, the 1995 energy strategy gives priority to increasing efficiency in energy production and consumption and promoting energy conservation. Finally, the national communication does not describe any mitigation measures targeting CH_4 and N_2O emissions, although limited information was provided during the country visit on Gazprom's project to identify ways to reduce emissions both at the gas production and the final gas consumption stages. It would seem that the biggest challenge to the gas industry lies in the refurbishment of the trunk line system, including both pipelines and compressor stations. Action in this regard would necessarily have a mitigation effect and should, if taken, be reported in future communications.

13. The national communication projected energy-related CO_2 emission levels for 1995, 2000 and 2010 which were, respectively, 18, 13 and 4 per cent lower than the 1990 levels. These emission scenarios refer to energy-related (fuel combustion) CO_2 emissions only (i.e. projections for CH_4 and N_2O were not provided during this review) and derive directly from projections made for key macroeconomic variables as part of the energy strategy. Such projections do not incorporate the effects of any of the measures described in the communication or undertaken elsewhere but not described and assume that total energy consumption will increase by 0.8 to 0.9 per cent annually until 2000. During the review, the team was presented with a revision of the original projections which takes into account scenarios based on the new energy strategy, as well as recent developments in the energy sector. Based on these new estimates, energy-related CO_2 emissions in 1995 were 26 per cent lower than in 1990 and are expected to be roughly at the same level below 1990 levels in 2000. By 2010 (though very preliminarily estimated), these emissions are expected to be roughly 20 and 10 per cent lower than in 1990, assuming an annual GDP growth rate of 1 to 2 per cent in the 2000-2010 period. The team suggested that a full description be provided of how projections were made and strongly recommends that non-energy CO_2 as well as CH_4 and N_2O emission projections be included in the next communication.

14. The Russian Federation has carried out commendable work in assessing the potential impacts of climate change on its economy and ecology. During the review, the team had the opportunity to appreciate the high-quality work carried out by the Institute of Global Climate

and Ecology. Results of several studies were well described in the national communication. The potential impacts of climate change in the Russian Federation include: (a) a substantial shift to the north of the permafrost zone, which currently occupies 58 per cent of the national territory; (b) a sea-level rise, particularly in the Caspian Sea, which allegedly has already flooded coastal arable lands and caused significant economic losses; (c) important changes in precipitation levels and amounts of soil moisture, with both negative and positive consequences, such as an increase in crop productivity in some areas and desertification in the south; and (d) depletion of freshwater resources. Lack of funds appears to be a major obstacle to the Russian Federation's continued work on the assessment of the impacts of climate change and consideration of options for adaptation measures.

15. The Russian Federation is not an Annex II Party to the Convention, although it is a member of the restructured Global Environment Facility since 1994. A considerable amount of technical knowledge is still shared with other countries of the Commonwealth of Independent States. Limited information was provided on technology transfer from OECD countries to the Russian Federation, although it is known that the level of international cooperation for nuclear plant safety in Russia has recently decreased. The Russian Federation follows with keen interest the pilot phase of activities implemented jointly (AIJ) and, at the time of this review, 6 AIJ projects had been approved by the Inter-Agency Commission on Climate Change.

16. Through the years, the scientific community in the Russian Federation and formerly in the Soviet Union have made invaluable contributions to research on climate change causes and impacts, including early active participation in the IPCC activities. High calibre research on, for example, climate change impacts on terrestrial ecosystems are being carried out by such world standard institutions as the Institute of Global Climate and Ecology.

17. Despite the fact that climate change and environmental issues do not appear to be matters of priority to the general public in the Russian Federation, the implementation of policies and measures could be greatly enhanced by better public awareness of their environmental and economic benefits. The review team felt that future cooperation of the Inter-Agency Commission on Climate Change with national non-governmental organizations and the mass media could play an important role in supporting energy efficiency policies as well as future climate change measures.